Marine Life Protection Act Initiative

REVISED APRIL 22, 2008

SAT Evaluations of Draft Proposals
North Central Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force
April 22, 2008 • San Rafael, CA

Presented by Dr. Steve Gaines

MLPA Goals: Populations

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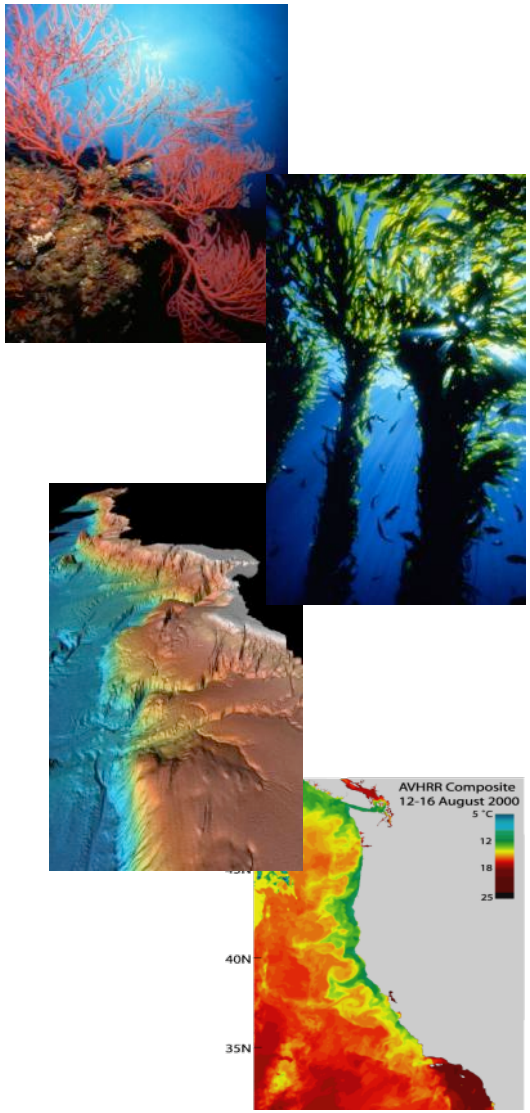
1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as **a network**.



Size Analysis Methods

- Measure individual MPA lengths and area
- Combine contiguous MPAs into single MPA complexes
- Consider level of protection
- Tabulate MPA lengths and areas relative to minimum & preferred guidelines

MPA Cluster Sizes
(Very High Protection)

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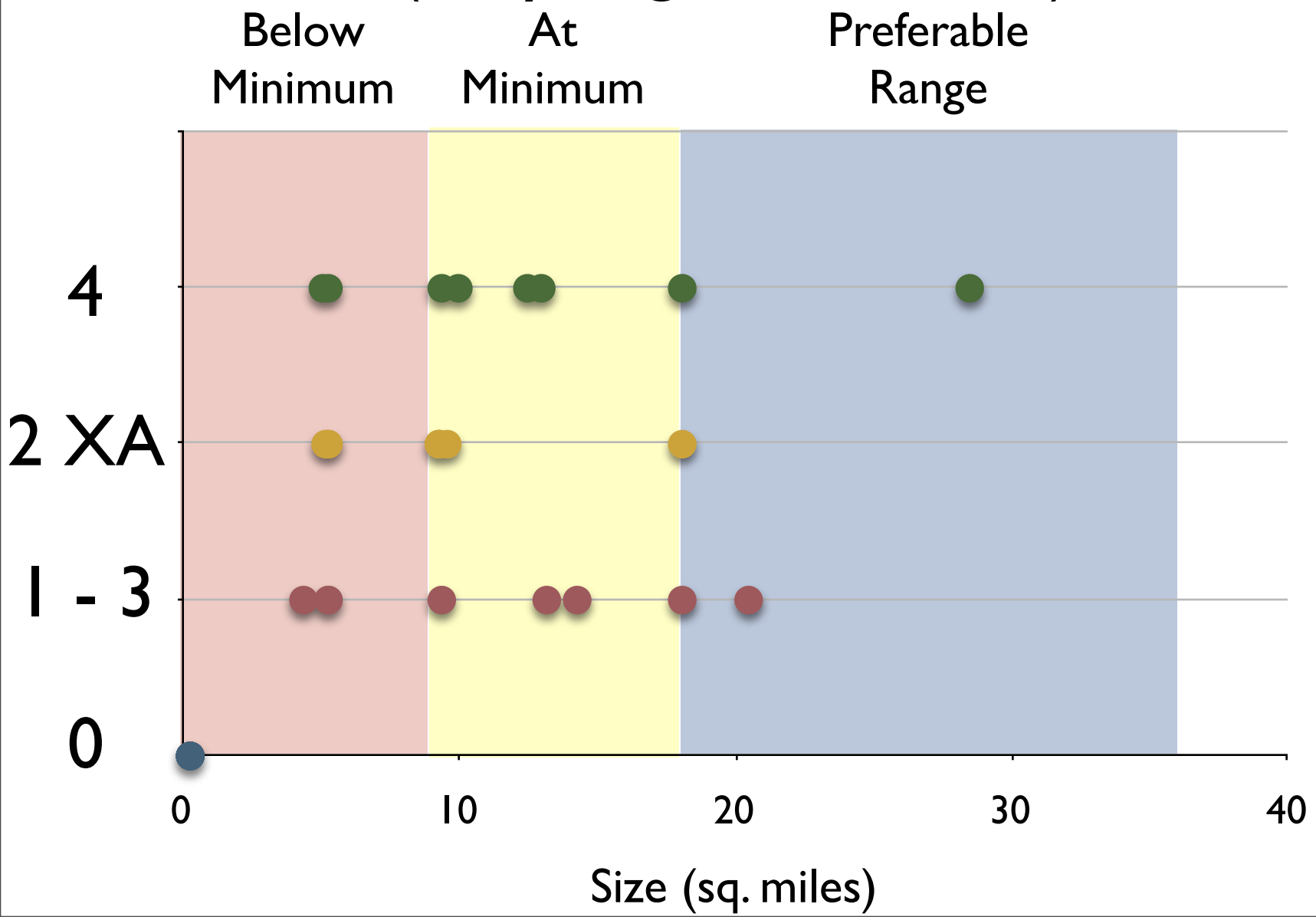

MPA Cluster Sizes (High Protection)

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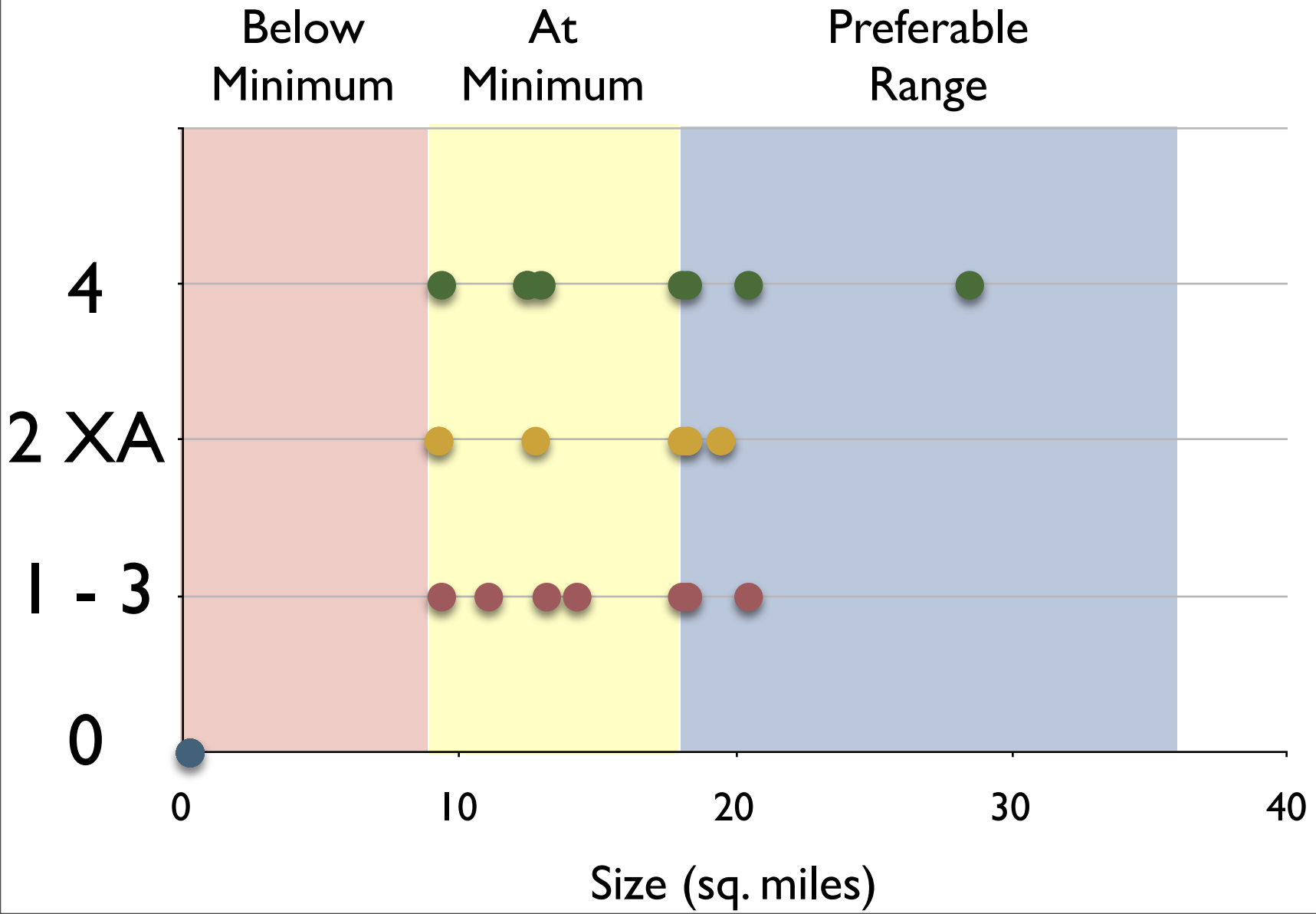

MPA Cluster Sizes

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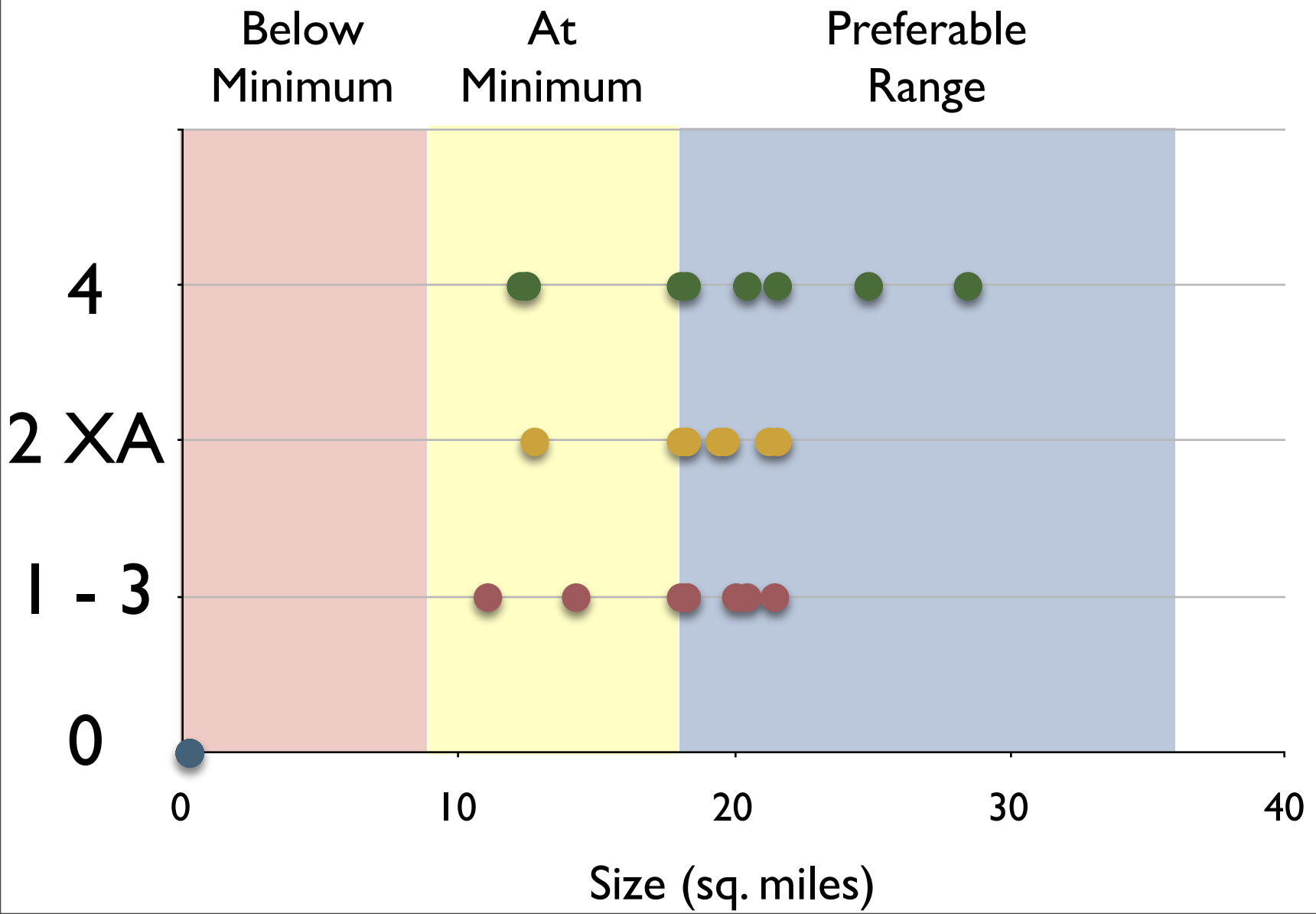
(Moderately High Protection)



MPA Size Conclusions

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- Most MPAs meet minimum size guideline
- All MPAs meet min size for High/Mod High Prot
- Prop 4 generally has larger MPAs
- Prop 4 has the most MPAs in preferred size range

Avg MPA Size	Very High Protection	High Protection	Mod High Protection
1 - 3	12.2	14	17.7
2 XA	9.4	13.8	18.8
4	12.7	16.6	18.8*

*Proposal 4 has two more MPAs than other Proposals

Changes in Avg MPA Sizes
(High Protection)

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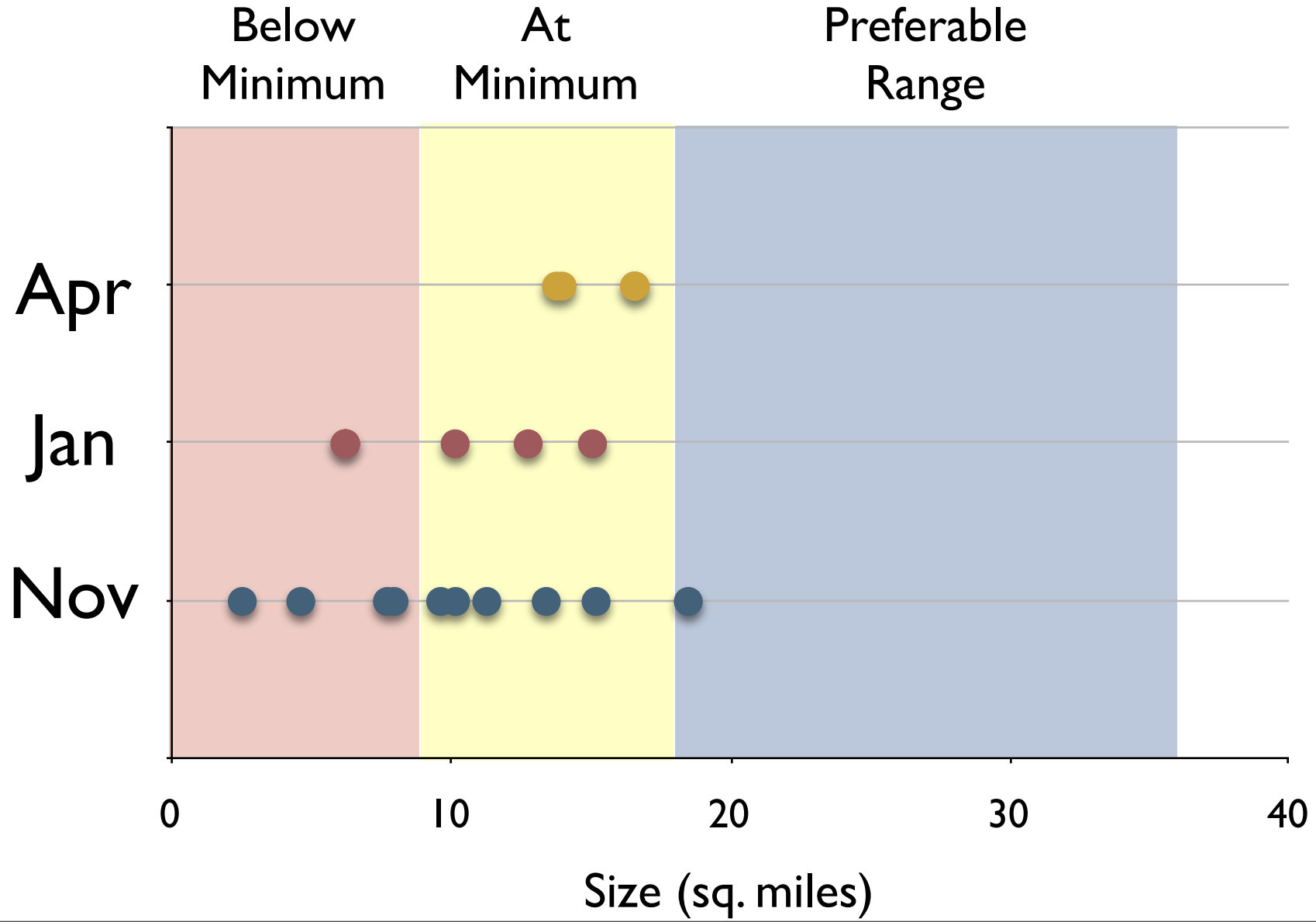

SAT Guidelines: Goals 2 and 6

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0 – 1 km	1 – 10 km	10 – 100 km	100 – 1000 km	> 1000 km
Invertebrates abalone, mussel, octopus, sea star, snail, urchin **Rockfishes** black & yellow brown, copper, gopher, grass,* kelp, quillback, starry, treefish, vermillion **Other Fishes** cabezon, eels, greenlings, giant seabass, black, striped, and pile perch, pricklebacks	**Rockfishes** black, China, greenspotted,* olive, yelloweye **Other Fishes** walleye perch*	**Invertebrates** Dung. crab** **Rockfishes** blue, bocaccio, yellowtail **Other Fishes** Ca. halibut, lingcod, starry flounder **Birds** gulls, cormorants **Mammals** harbor seals, otter	**Rockfishes** canary **Fishes** anchovy, big skate, herring, Pacific halibut, sablefish,** salmonids,** sole spp., sturgeon **Birds** gulls** **Mammals** porpoises sea lions**	**Invertebrates** jumbo squid** **Fishes** sardine sharks** tunas** whiting** **Turtles**** **Birds** albatross** pelican** shearwater** shorebirds** terns** **Mammals** dolphins sea lions** whales**

* Studies of this species included fewer than 10 individuals
** Seasonal Migration

SAT Guidelines: Goals 2 and 6

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** Seasonal Migration

Spacing Analysis Methods

- MPAs must meet the minimum size guidelines (9 sq mi)
- Characterize each MPA by the habitats included
- For each habitat, measure the gaps between adjacent MPAs

Maximum Gaps

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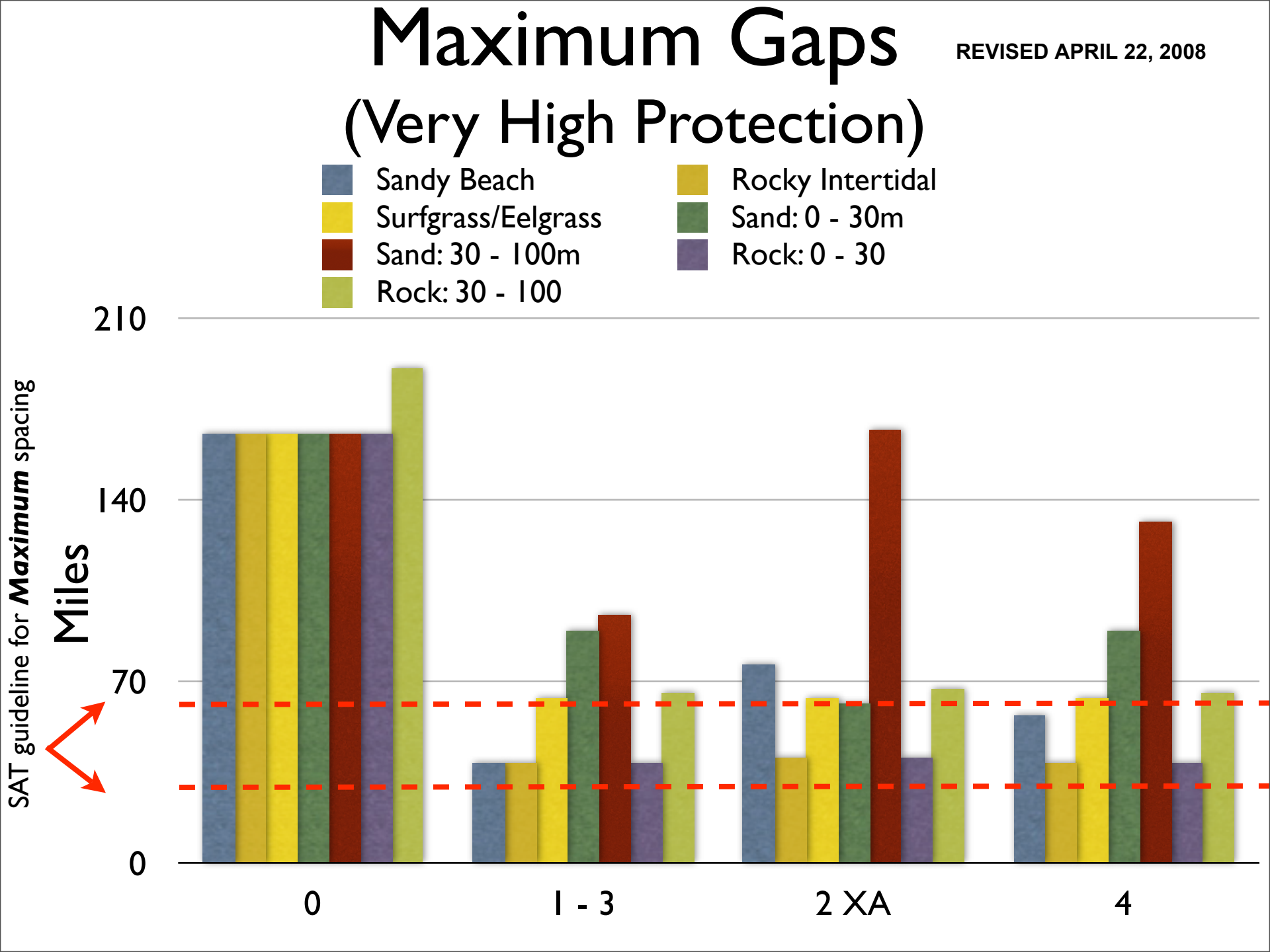
(Very High Protection)



Maximum Gaps
(High Protection)

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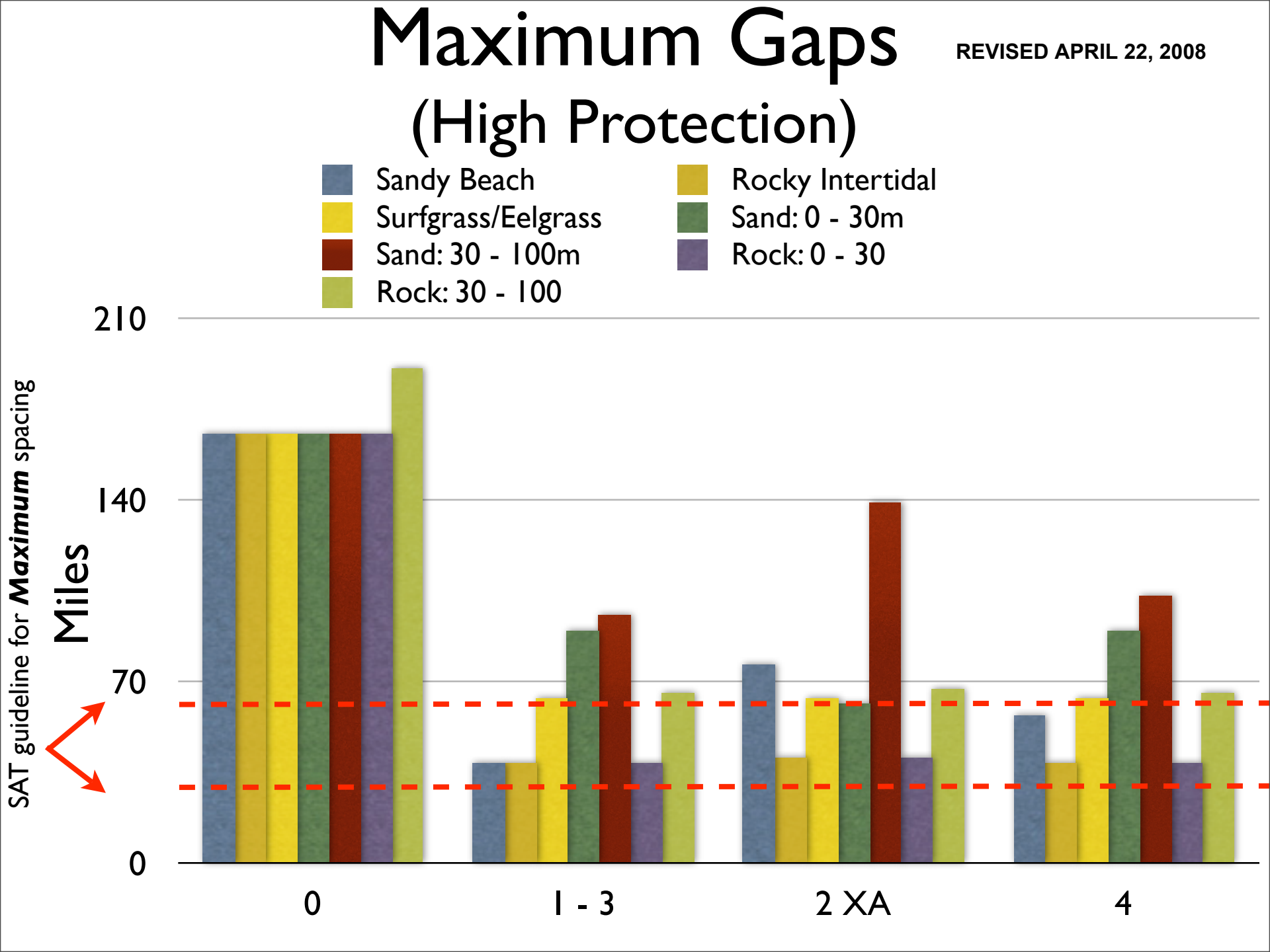

Maximum Gaps

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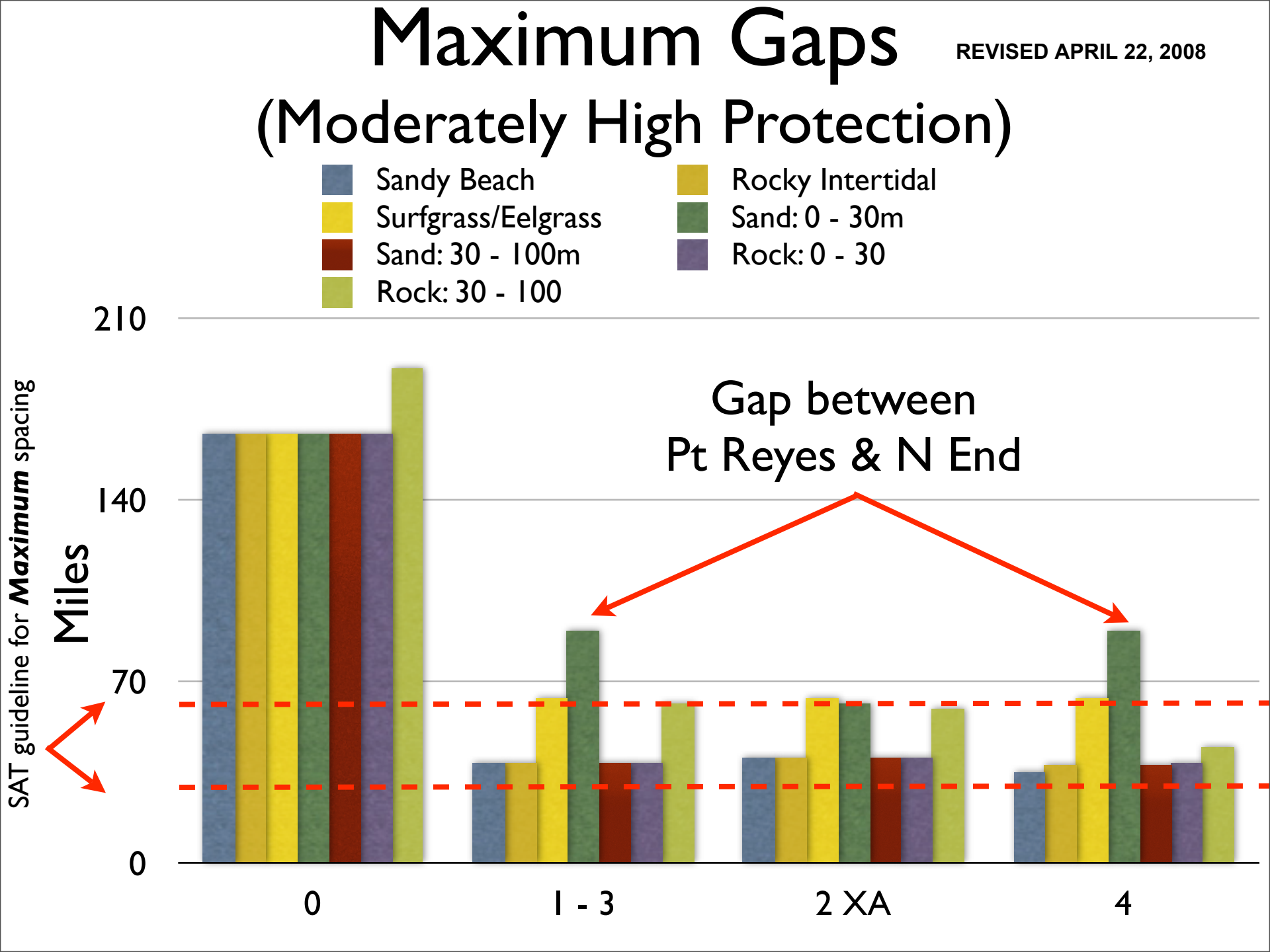
(Moderately High Protection)



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MPA Spacing Conclusions

- All Proposals have gaps that exceed guidelines for two habitats at Very High and High Levels of Protection
- Large gaps are all in sandy habitats
- Proposal 2 XA meets guidelines for Moderately High Protection
- Proposals 1 - 3 and 4 have a single gap (Shallow Sand) that exceeds guidelines for Moderately High Protection

SAT Evaluations

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